

EFFECT OF MOTOR ACCIDENTS AND OTHER CAUSES OF DEATH ON WORK-LIFE EXPECTANCY IN CONNECTICUT

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ALTHOUGH motor vehicle accidents account for less than 2 percent of all deaths in Connecticut each year, they result in a per capita loss of productive working life that is from two to three times greater than the loss occasioned by any of the leading causes of death. (Productive working life is defined as the number of years, on the average, a person can expect to be an active member of the labor force.)

In recent years, there has been an increasing amount of concern over the extent to which mortality among persons of working age represents an economic loss to society. Most of the research in this area has been concerned with relating overall levels of mortality to labor force participation rates and constructing tables of working life (1). Relatively little attention has been devoted to assessing the impact of specific causes of death on the length of working life. This study compares the loss of man-years of labor force participation resulting from the leading causes of death in Connecticut; in particular, attention is focused on the extent to which motor vehicle accidents contribute to a loss of working life.

The three leading causes of death in Connecticut are heart disease, cancer, and vascular lesions affecting the central nervous system. In 1959 the death rates for these three causes (the number of deaths from each cause per 100,000 population) were 391.8 for heart disease, 171.4 for cancer, and 110.3 for vascular lesions (2). In contrast, the rate of mortality due to motor vehicle accidents in 1959 was only 12.0 per 100,000 population. At first glance it would appear that the loss in working life resulting from

motor vehicle accidents is insignificant. However, the number of years of work life lost owing to a particular cause is also a function of age at death, and accident victims are much younger, on the whole, than persons who die from heart disease and other chronic causes of death.

Among Connecticut males in 1959, approximately two-thirds (64.7 percent) of all deaths due to heart disease, cancer, and vascular lesions occurred in persons 65 years of age or older. On the other hand, 87.3 percent of the men dying in motor vehicle accidents were under 65 years of age, and more than half of these (51.6 percent) were under age 25. The leading chronic causes of death are largely characteristic of the later adult ages, and more often than not persons succumbing to these diseases have either retired or are near the age at which they will retire from active participation in the labor force; hence, the per capita number of man-years of work life lost because of these three causes is relatively slight. On the other hand, the fact that motor vehicle accidents are much more common at the younger ages means that deaths from these causes can lead to a loss in working life amounting to 20, 30, or even more years.

In Connecticut each motor vehicle fatality represents an average loss of 26.2 years of working life (table 1). This is substantially larger than the average loss for any of the three leading causes of death. Deaths due to heart disease, for example, result in an average loss in work life of only 7.7 years.

Between 1950 and 1959, a reduction in the average number of years of work life lost occurred because of a decline in deaths for each of the three leading causes (table 2). For each cause, the average age at death increased between 1950-54 and 1955-59. For deaths attrib-

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Table 1. Man-years of working life lost owing to motor vehicle accidents and other leading causes of death, Connecticut males, 1950-59

Cause of death	Total deaths	Total work-years lost	Work-years lost per death
Heart disease.....	49, 422	379, 551	7. 7
Cancer.....	20, 818	191, 283	9. 2
Vascular lesions.....	10, 567	68, 081	6. 4
Motor vehicle accidents.....	2, 145	56, 294	26. 2

Table 2. Man-years of working life lost owing to motor vehicle accidents and other leading causes of death, Connecticut males, 1950-54 and 1955-59

Cause of death	Work-years lost per death		Percentage change 1950-54 to 1955-59
	1950-54	1955-59	
Heart disease.....	7. 8	7. 6	-3. 2
Cancer.....	9. 3	9. 1	-2. 7
Vascular lesions.....	6. 7	6. 2	-7. 8
Motor vehicle accidents.....	25. 1	27. 3	+9. 0

uted to motor vehicles, an opposite trend is apparent. The average age of the victims of motor vehicle accidents decreased. For example, youths aged 15-19 accounted for 8 percent of the motor vehicle deaths between 1950-54. In the second half of the decade, they accounted for more than 12 percent of the automobile fatalities.

Deaths caused by motor vehicle accidents effect a much greater loss of productive work life than mortality statistics often suggest. For this reason, efforts to reduce motor vehicle fatalities can be especially rewarding.

NOTE ON METHODOLOGY

To measure the extent to which a particular cause of death leads to a loss of active working life, it is necessary to weight the number of deaths due to that cause at each age by the corresponding number of years of labor force participation remaining, on the average, to persons alive at this age. This was done in the present study as follows:

(a) Separately for each of the four causes being considered, the number of male deaths at each age in Connecticut during the periods 1950-54, 1955-59, and 1950-59 were multiplied by the average work-life expectancy values at corresponding ages taken from a table of working life of the U.S. male population (1). For persons who died at ages under 14 years, it was assumed that work-life expectancy was the same as at age 14.

(b) For each time period, the resulting products were summed to yield an estimate of the total number of work-years lost from each cause.

(c) Finally, a measure of the relative impact of each cause on loss of working life was obtained by dividing the total number of work-years lost from each cause by the total number of deaths from that cause.

REFERENCES

- (1) U.S. Department of Labor, Bureau of Labor Statistics: Tables of working life: Length of working life for men, Bull. No. 1001, 1950. Tables of working life for women, 1950, Bull. No. 1204, 1956.
- (2) U.S. National Office of Vital Statistics: Vital statistics of the United States, 1959. Vol. 1, sec. 6, mortality statistics, table 6N. U.S. Government Printing Office, Washington, D.C.